FORM PTO-1390 (REV. 5-93)	U.S. DEPARTMENT OF COMMERCE PATENT AND TRADEMARK OFFICE	ATTORNEY'S DOCKET NUMBER 10191/1365

TRANSMITTAL LETTER TO THE UNITED STATES DESIGNATED/ELECTED OFFICE (DO/EO/US) CONCERNING A FILING UNDER 35 U.S.C. 371	U.S. APPLICATION NO. (If known, see 37 CFR 1.5) **09/509401**

INTERNATIONAL APPLICATION NO PCT/DE98/02808	INTERNATIONAL FILING DATE 22 Sept. 1998 (22.09.98)	PRIORITY DATES CLAIMED: 26 Sept. 1997 10 Sept 1998 (26.09.97) (10.09 98)

TITLE OF INVENTION
A METHOD FOR ASSIGNING A REMOTE CONTROL OPERATION TO A BASE STATION

APPLICANT(S) FOR DO/EO/US
Stefan SCHMITZ

Applicant(s) herewith submits to the United States Designated/Elected Office (DO/EO/US) the following items and other information

1. ☒ This is a **FIRST** submission of items concerning a filing under 35 U.S.C. 371.

2. ☐ This is a **SECOND** or **SUBSEQUENT** submission of items concerning a filing under 35 U.S.C. 371.

3. ☒ This is an express request to begin national examination procedures (35 U.S.C. 371(f)) immediately rather than delay examination until the expiration of the applicable time limit set in 35 U.S.C. 371(b) and PCT Articles 22 and 39(1).

4. ☒ A proper Demand for International Preliminary Examination was made by the 19th month from the earliest claimed priority date

5. ☒ A copy of the International Application as filed (35 U.S.C. 371(c)(2))

    a ☐ is transmitted herewith (required only if not transmitted by the International Bureau).

    b. ☒ has been transmitted by the International Bureau.

    c. ☐ is not required, as the application was filed in the United States Receiving Office (RO/US)

6. ☒ A translation of the International Application into English (35 U.S.C. 371(c)(2)).

7. ☒ Amendments to the claims of the International Application under PCT Article 19 (35 U.S.C. 371(c)(3))

    a. ☐ are transmitted herewith (required only if not transmitted by the International Bureau).

    b. ☐ have been transmitted by the International Bureau.

    c. ☐ have not been made; however, the time limit for making such amendments has NOT expired.

    d. ☒ have not been made and will not be made.

8. ☐ A translation of the amendments to the claims under PCT Article 19 (35 U.S.C. 371(c)(3)).

9. ☒ An oath or declaration of the inventor(s) (35 U.S.C. 371(c)(4)). (unsigned)

10. ☒ A translation of the annexes to the International Preliminary Examination Report under PCT Article 36 (35 U.S.C. 371(c)(5)).

Items 11. to 16. below concern other document(s) or information included:

11. ☒ An Information Disclosure Statement under 37 CFR 1.97 and 1.98.

12. ☐ An assignment document for recording. A separate cover sheet in compliance with 37 CFR 3.28 and 3.31 is included.

13. ☒ A **FIRST** preliminary amendment.

    ☐ A **SECOND** or **SUBSEQUENT** preliminary amendment.

14. ☐ A substitute specification.

15. ☐ A change of power of attorney and/or address letter

16. ☒ Other items or information: International Search Report, PCT/RO/101, Return Receipt Postcard, and International Preliminary Examination Report and Annexes thereto.

Express Mail No.:
EL179105855

430 Rec'd PCT/PTO 2 7 MAR 2000

U.S. APPLICATION NO. if known see 37 C.F.R. 1. **09/509401**	INTERNATIONAL APPLICATION NO. **PCT/DE98/02808**	ATTORNEY'S DOCKET NUMBER **10191/1365**

17. ☒ The following fees are submitted:

Basic National Fee (37 CFR 1.492(a)(1)-(5)):

Search Report has been prepared by the EPO or JPO $840.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) $670 00

No international preliminary examination fee paid to USPTO (37 CFR 1.482) but international search fee paid to USPTO (37 CFR 1.445(a)(2)) $760.00

Neither international preliminary examination fee (37 CFR 1.482) nor international search fee (37 CFR 1.445(a)(2)) paid to USPTO $970.00

International preliminary examination fee paid to USPTO (37 CFR 1.482) and all claims satisfied provisions of PCT Article 33(2)-(4) $96.00

CALCULATIONS	PTO USE ONLY

ENTER APPROPRIATE BASIC FEE AMOUNT =	$ 840	

Surcharge of $130.00 for furnishing the oath or declaration later than ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(e)). $

Claims	Number Filed	Number Extra	Rate		
Total Claims	9 - 20 =	0	X $18.00	$0	
Independent Claims	3 - 3 =	0	X $78.00	$0	
Multiple dependent claim(s) (if applicable)			+ $260.00	$	

TOTAL OF ABOVE CALCULATIONS =	$840	

Reduction by 1/2 for filing by small entity, if applicable. Verified Small Entity statement must also be filed (Note 37 CFR 1.9, 1.27, 1.28). $

SUBTOTAL =	$840	

Processing fee of $130.00 for furnishing the English translation later the ☐ 20 ☐ 30 months from the earliest claimed priority date (37 CFR 1.492(f)). + $

TOTAL NATIONAL FEE =	$840	

Fee for recording the enclosed assignment (37 CFR 1 21(h)). The assignment must be accompanied by an appropriate cover sheet (37 CFR 3.28, 3.31). $40.00 per property + $

TOTAL FEES ENCLOSED =	$840	

	Amount to be: refunded	$
	charged	$

a. ☐ A check in the amount of $_____ to cover the above fees is enclosed.

b. ☒ Please charge my Deposit Account No _11-0600_ in the amount of $840.00 to cover the above fees. A duplicate copy of this sheet is enclosed.

c. ☒ The Commissioner is hereby authorized to charge any additional fees which may be required, or credit any overpayment to Deposit Account No. _11-0600_. A duplicate copy of this sheet is enclosed.

NOTE: Where an appropriate time limit under 37 CFR 1.494 or 1.495 has not been met, a petition to revive (37 CFR 1.137(a) or (b)) must be filed and granted to restore the application to pending status.

By: *Des Mayer* (Reg. No. 41,172)

SEND ALL CORRESPONDENCE TO:

SIGNATURE

Kenyon & Kenyon
One Broadway
New York, New York 10004

Richard L. Mayer, Reg. No. 22,490
NAME
3/27/00
DATE

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NY01 210006 v 1

IN THE UNITED STATES PATENT AND TRADEMARK OFFICE

Applicant(s)	:	Stefan SCHMITZ
Serial No.	:	To Be Assigned
Filed	:	Herewith
For	:	A METHOD FOR ASSIGNING A REMOTE CONTROL OPERATION TO A BASE STATION
Examiner	:	To Be Assigned
Group Art Unit	:	To Be Assigned

Assistant Commissioner for Patents
Washington, D.C. 20231

PRELIMINARY AMENDMENT

SIR:

Please amend the above-identified application before examination as follows:

In The Specification:

On page 1, line 1, change "Background Information" to --<u>Background Information</u>--.

On page 1, line 3, before "invention" insert --present--.

On page 1, line 4, change "German Patent Application AZ: 196 45 769.6" to --German Patent Application No. 196 45 769--.

On page 1, line 16, change "require time response" to --require time. A response--.

On page 1, line 24, insert --<u>Summary Of The Invention</u>--.

On page 1, line 25, before "invention" insert --present--.

On page 2, delete line 1 and in its place insert --The--.

On page 2, line 2, before "invention" insert --present--.

On page 2, delete lines 9-10.

On page 2, delete lines 12-17 and in their place insert:

--Brief Description Of The Drawings

Figure 1 depicts a block diagram of an access device.

Figure 2 depicts a flowchart illustrating the operation of the access device of Figure 1.

Detailed Description--.

On page 8, delete line 1 and insert --What Is Claimed Is:--.

In The Claims:

Please cancel original claims 1-9, without prejudice, and please cancel substitute claims 5-9, without prejudice. Please also add new claims 10-18 as follows:

10.   (New) A method for assigning a remote control operation to a base station, comprising the steps of:

causing the base station to transmit a search signal;

returning a contact signal from the remote control operation in response to an agreement of the search signal with a stored reference signal;

causing the base station to subsequently transmit an activation signal capable of being changed in response to each assignment, the activation signal being capable of verifying a matching to the remote control operation; and

before the search signal is transmitted from the base station, determining the activation signal, wherein the activation signal is only recalled for the assignment.

11.   (New) The method according to claim 10, further comprising the step of:

before the search signal is transmitted by the base station, determining a response signal, wherein the remote control operation responds in accordance with the

response signal after the activation signal is received.

12.   (New) The method according to claim 10, wherein:

the activation signal is determined after a conclusion of a successful assignment of the remote control operation to the base station.

13.   (New) The method according to claim 10, further comprising the step of:

determining another activation signal capable of being changed, the other activation signal being determined if a response signal sent back by the remote control operation in response to the activation signal does not agree with a predetermined setpoint response signal in the base station.

14.   (New) The method according to claim 10, wherein:

the search signal is transmitted a plurality of times, each time being immediately after another, if no contact signal is received in response to the preceding search signal.

15.   (New) The method according to claim 13, wherein:

an execution time of the step of determining the other activation signal is lengthened in comparison to a shortest possible execution time.

16.   (New) A base station, comprising:

a transmitting/receiving device for transmitting a search signal and an activation signal capable of being changed, and for receiving a contact signal and a response signal from remote control operations;

an arrangement for performing one of a causing and an evaluating of each signal received by the transmitting/receiving device, wherein:

the arrangement for performing one of the causing and the evaluating

determines the activation signal before a transmission of the search signal from the base station occurs, and

the arrangement for performing one of the causing and the evaluating only recalls the activation signal for an assignment; and

a non-volatile memory unit for storing fixed and changeable assignment information, the non-volatile memory unit assigning at least one of the remote control operations to the base station and making possible a test for matching.

17.   (New) The base station according to claim 16, wherein:

the non-volatile memory unit is executed as a memory medium capable of being programmed once.

18.   (New) A system, comprising:

a base station including:

a first transmitting/receiving device for transmitting a search signal and an activation signal capable of being changed, and for receiving a contact signal and a response signal from remote control operations,

a first arrangement for performing one of a causing and an evaluating of each signal received by the transmitting/receiving device, wherein:

the arrangement for performing one of the causing and the evaluating determines the activation signal before a transmission of the search signal from the base station occurs, and

the arrangement for performing one of the causing and the evaluating only recalls the activation signal for an assignment, and

a first non-volatile memory unit for storing fixed and changeable assignment information, the non-volatile memory unit assigning at least one of the remote control operations to the base station and making possible a test for matching;

a second transmitting/receiving device for receiving the search signal and the activation signal, and for transmitting the contact signal and the response signal;

a second arrangement for performing one of an evaluating and a transmitting of signals received; and

a second non-volatile memory unit for storing another set of assignment information and for assigning at least one of the remote control operations to the base station.

In The Abstract:

Attached hereto is a sheet containing an Abstract, the entry of which is respectfully requested by Applicant.

Remarks

This Preliminary Amendment cancels original claims 1-9, without prejudice, in the underlying PCT Application No. PCT/DE98/02808, and cancels substitute claims 5-9. The Preliminary Amendment also adds new claims 10-18. The new claims do not add new matter to the application but do conform the claims to U.S. Patent and Trademark Office rules.

The amendments to the specification and abstract are to conform the specification and abstract to U.S. Patent and Trademark Office rules. The amendments to the specification and abstract do not introduce new matter into the application.

The underlying PCT application includes a Search Report dated February 18, 1999, and an International Preliminary Examination Report dated January 7, 2000, copies of which are submitted herewith.

Applicant asserts that the present invention is new, non-obvious, and useful. Consideration and allowance of the claims are requested.

Respectfully submitted,

KENYON & KENYON

By: *[signature]* (Reg. No. 41,172)

Dated: 3/27/00

By: *[signature]*

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Abstract Of The Disclosure

A method and device for assigning a remote control operation to a base station, the method permitting a rapid execution of an assignment test, in particular a rapid execution of a verification communication.

A METHOD FOR ASSIGNING A REMOTE CONTROL OPERATION TO A BASE STATION

Background Information

The invention relates to a method in accordance with the species of the main claim, as described in the German Patent Application AZ: 196 45 769.6. In accordance therewith, the

5   assignment of a remote control operation to a base station arranged in a motor vehicle takes place by the base station transmitting a search signal, in response to which the remote control operations located in the transmission range of the search signal respond by transmitting back a contact signal at time points characteristic for the remote control operations. By evaluating the entry time points of the contact signal return transmissions, the base station detects the

10   available remote control operations. It selects one of them and carries out with it a "challenge response" verification. Because an unequivocal remote control recognition is possible through exchanging only one signal, and the signal can be designed in a simple manner because it is not security-relevant, the entire detection process proceeds very rapidly. Therefore, for the speed of assignment, it is above all the subsequent challenge-response verification that is

15   determinative. The verification is based on carrying out security-relevant arithmetic operations, which are extensive and, accordingly, require time response signal, user-specific, integrated circuits (ASIC) specially developed for this purpose are used, which carry out the challenge or response calculation in less than three milliseconds. Thus the triggering of the assignment test can take place as a result of actuating the door handle of a motor vehicle, so

20   that the door can only be opened if the remote control operation has been verified as belonging to the motor vehicle. The user does not notice the assignment process. The above-mentioned ASICs perform their function well, but they are comparatively expensive to manufacture.

25   It is the objective of the invention to indicate a method for assigning a remote control operation to a base station, the method permitting a rapid execution of an assignment test, in particular a rapid execution of a verification communication.

The objective is achieved through a method having the features of the main claim. The method according to the invention can be easily realized as a program in the microprocessor that is present in any case in the base station and in the remote control operation, making the availability of an ASIC superfluous. In this context, the method assures the same security as

5   when an ASIC is used. Advantageously, an increase in security can be realized due to the fact that the speed of the challenge-response calculation can be controlled in a deliberate manner if the challenge-response dialog is carried out multiple times one immediately after the other.

One exemplary embodiment of the invention is discussed in greater detail below with

10   reference to the drawing.

Drawing

Figure 1 depicts a block diagram of an access device, and Figure 2 depicts a flowchart to

15   make clear its operation.

Description

Figure 1 depicts a base station 10, which can be a part of an apparatus or object, or which is

20   permanently assigned to one such. For example, the base station can be a part of the access control device of a building or of a motor vehicle. A further component of the access device depicted in Figure 1 is an operating device 20 designated hereinafter as remote control operation, which is assigned to the base station functionally via a contactless signal transmission link 30. The remote control operation, in particular, can be a transponder. Via

25   undepicted operative connections, base station 10 acts upon the technical device, to which or to a part of which, it is assigned. When used in a motor vehicle, it controls, for example, access to the vehicle or to its ignition.

A component of base station 10 is a microprocessor 13, which controls the operation of base

30   station 10, for this purpose, in particular, prompting the transmission of signals and evaluating incoming signals. Connected to the microprocessor is a transmitting/receiving device 11 for transmitting or receiving signals that are transmitted, without contact, via signal transmission link 30. Furthermore, microprocessor 13 has assigned to it a memory 14. In it is

found assignment information, on the basis of which base station 10 recognizes assigned remote control operations 20. The assignment information is: a serial number 15, a manufacturer code 17, an encryption keycode 31, a directory 16 having information on remote control operations 20 assigned to base station 10, and a random number 18. Serial

5   number 15 is characteristic for base stations 10 and remote control operations 20 that are assigned to each other. It is determined by the manufacturer of the technical device to which base station 10 and remote control operations 20 are assigned. For use in motor vehicles, the determination can be made by the vehicle manufacturer. Manufacturer code 17 unambiguously designates the corresponding apparatus, i.e., base station 10. It is issued by

10   the manufacturer of the base station and is unchangeable. Directory 16 contains for every assigned remote control operation 20 a data record 16a, 16b, 16c, each of which contains group number 25 of a remote control operation 20, its manufacturer code 27, a random number, as well as a setpoint response. Group numbers 25, in this context, distinguish the remote control operations that have the same serial numbers and that are assigned to a base

15   station 10, and manufacturer code 27, specific in each case, in connection with encryption keycode 31 and random number 18, which is generated by microprocessor 13, functions to produce the setpoint response. Encryption keycode 31 is also advantageously determined by the manufacturer of the corresponding technical device, such as a motor vehicle manufacturer. In each case, an entire data record 16a, 16b, 16c makes possible the

20   verification of a corresponding remote control operation 20.

The remote control operation has at its disposal a transmitting/receiving device 21 corresponding to base-station-side transmitting/receiving device 11, for receiving signals transmitted by base station 10 or for transmitting signals to base station 10. By analogy to the

25   base station, a microprocessor 23 is connected downstream of transmitting/receiving device 21, the microprocessor controlling the operation of remote control operation 20, especially undertaking the evaluation of the signals coming in via transmitting/receiving device 22, initiating subsequent measures as a function of the results, and monitoring the generation of output signals. Microprocessor 23 has assigned to it a memory unit 24, wherein assignment

30   information is stored for assigning remote control operation 20 to a base station 10. Stored for this purpose -- by analogy to base station 10 -- are a serial number 15, a group number 25, a manufacturer code 27, as well as an encryption keycode 31. The significance of the memory contents corresponds specifically to the significance of the similar memory contents in

memory 14 of base station 10. The manufacturer code is issued by the manufacturer of remote control operation 20 and designates the latter unambiguously. Serial number 15 is a code that is characteristic for the entire device composed of base station 10 and corresponding remote control operations 20 and is identical to the serial number contained in memory 14 of

5 base station 10. Group number 25 distinguishes remote control operations from each other having same serial number 15. The group number is determined by the user in response to the use of the entire device. Encryption keycode 31 is determined by the manufacturer of the technical device corresponding to base station 10, and it is identical to the one present in the base station. In connection with manufacturer code 27 and the challenge signal supplied by

10 base station 10 via signal transmission link 30, the encryption keycode functions to verify the matching to a base station 10.

Between base station 10 and remote control operations 20, there exists a signal transmission link for transmitting contactless transmissible signals between remote-control-operation-side

15 transmitting/receiving device 21 and base-station-side transmitting/receiving device 11. The signals emitted by base-station-side transmitting/receiving device 11, in this context, reach all remote control operations 20 located within their transmission range. As signals, it is expedient to use infrared or high frequency signals.

20 One base station 10 can have assigned to it a plurality of remote control operations 20. All remote control operations 20 and base station 10 have available to them in their memories 14, 24 an identical serial number 15 and, in the verification, make use of an encryption keycode 31. Individual remote control operations 20 are distinguished by their group numbers 25 and their manufacturer code 27.

25

On the basis of Figure 2, the operation of the device depicted in Figure 1 is explained. In this context, a letter B or F is placed in front of each sequence step, indicating whether the corresponding sequence step takes place in base station 10: B or in a remote control operation 20: F.

30

The assignment process is triggered by the actuation of an undepicted mechanical, electrical, or electro-optical triggering mechanism by a user, step 100. When used in a motor vehicle, the triggering mechanism can, specifically, entail the actuating of the door handle.

On the basis of a signal emitted in response to triggering, microprocessor 13 of base station 10 first sets an internal counter A at value 0, step 102. Then the microprocessor from a memory 14 loads random number 18, which then constitutes, for all remote control operations 20 assigned to base station 10, the activation signal, hereinafter termed the

5   "challenge" signal, and expected response signals 16a, 16b, 16c, hereinafter termed "setpoint response," step 104. Thereafter, the microprocessor raises counter A by 1, step 106. Subsequently, microprocessor 13 initiates the transmission of a search signal by transmitting/receiving device 11, step 108. The search signal, in addition to start- and synchronization information, contains, in particular, serial number 15 stored in memory 14.

10   The search signal, advantageously, is unencrypted and is received by all remote control operations 20 located within the transmission range of signal transmission link 30 through their transmitting/receiving devices 21.

Their microprocessors 23, upon receiving a search signal, test whether serial number 15

15   transmitted along with the search signal agrees with the serial number functioning as reference signal and stored in memory 24 of remote control operation 20. In the case of non-agreement, remote control operation 20 does not participate further in the matching test. In the event of agreement between the signals compared with each other, microprocessor 23 brings about a response in the form of a contact signal, step 112. Functioning as contact

20   signal is a short, simply constructed signal, for example group number 25 of respective remote control operation 20 in bit-coded form. It is advantageous if the contact signal, like the search signal, is unencrypted. The transmission of the contact signal is effected by microprocessor 24 after the expiration of a time interval from the reception of the search signal, the time interval being determined by group number 25 and being characteristic for

25   remote control operation 20. The transmission then takes place in a time window having predetermined length. The transmission is dimensioned such that a reliable assignment of the contact signal to the time window is possible both for remote control operation 20 as well as for base station 10.

30   By checking the time windows in which the contact signals have been received, microprocessor 13 of base station 10 then establishes which remote control operations 20 having which group numbers are present, step 114. If no remote control operation 20 is detected as being present, microprocessor 13 checks the value of counter A, step 116. If it is

smaller than a predetermined reference value, for example 5, the microprocessor immediately once again causes the transmission of a search signal and repeats the process from step 106 in sequence. If the reference value is exceeded, microprocessor 13 interrupts the matching test, step 117. If the check test in step 114 yielded the result that at least one remote control operation 20 is present, microprocessor 13, from among present remote control operations 20, selects one, using which it subsequently carries out a matching test, step 118. After selecting a remote control operation, it sets a second internal counter B up one level, step 120. Thereafter, microprocessor 13 causes the transmission of a subsequent challenge signal via transmitting/receiving device 11. Random number 18, stored in memory 14, functions as the challenge signal.

Selected remote control operation 20, through its transmitting/receiving device 21, receives the challenge signal and from it, in connection with manufacturer code 27 and encryption keycode 31, formulates a "response" signal, which the remote control operation returns to base station 10 as the responding signal, step 124.

Microprocessor 13 of base station 10 compares for content the response signal sent back by remote control operation 20 with setpoint response signals 16a, 16b, 16c, previously loaded in step 104, of selected remote control operation 20, step 126. If the setpoint response signal and the response signal agree, microprocessor 13 sets internal counter B back to value 0, step 132, and it causes the transmission of a release signal, which, for example, makes possible the access to a motor vehicle and/or its operation, step 134. Subsequently, microprocessor 13 determines a random number 18 and, for every group number 25 entered in directory 16, establishes a new setpoint response signal, step 136. Using random number 18 and the newly formed setpoint response signals, the microprocessor then once again occupies memory locations 16a, 16b, 16c, and 18. The new memory contents function as the basis for the assignment test in connection with the next renewed triggering process. In rewriting memory contents 16 and 18, the matching test process is terminated, step 138.

If the check test in step 126 yields the result that the response signal sent back from remote control operation 20 does not agree with setpoint response signal 16a, 16b, 16c, loaded from the processor, microprocessor 13 sets internal counter B higher by one level, step 128. It then checks as to whether the contents of counter B exceed a prescribed limit value, for example,

the value 3, step 130. If that is the case, microprocessor 13, in accordance with step 136, establishes a new random number 18 and new setpoint response signals 16a, 16b, 16c, using which it overwrites the corresponding memory contents in memory 14. Then it terminates the assignment test process, step 138.

5

If the check test in step 130 yields the result that the limit value assigned to counter B has not yet been exceeded, microprocessor 13 also carries out a redetermination of random number 18 and of setpoint response signals 16a, 16b, 16c, in accordance with step 136. Subsequently, however, it continues in the repetition of step 104 and immediately reloads the redefined

10 memory contents 18 and 16a, 16b, 16c, to carry out subsequent step 106.

Provision can be made to carry out the determination of a new random number and a new setpoint response signal in accordance with step 136 in a controlled and deliberate manner. Since the redetermination takes place only in response to an authorized use in connection

15 with the confirmation of matching and of the transmission of a release signal, a deliberate execution of step 136 does not have an impact for the authorized user. On the contrary, it is made more difficult for an unauthorized user to simulate a matching of a remote control operation to a base station, even if it should be possible to cause the base station to transmit the challenge signal to the remote control operation by simulating a contact signal. Through a

20 controlled lengthening of the time for carrying out step 136, it is also made more difficult to discover a correct response signal through a permutative repetition of possible response signals.

Patent Claims

1. A method for assigning a remote control operation to a base station, the base station (10) transmitting (108) a search signal, the remote control operation (20) returning (112) a contact signal in response to agreement of the search signal with a stored reference signal, and base station (10) subsequently transmitting (122) an activation signal, that can be changed in response to each assignment, for verifying the matching to the remote control operation, characterized in that the changeable activation signal is determined already before the search signal is transmitted from the base station (136) and is only recalled for the assignment (104).

2. The method as recited in Claim 1,
characterized in that, already before the search signal is transmitted by the base station (10), the response signal is also determined (136), using which the corresponding remote control operation (20) is to respond after receiving the changeable activation signal.

3. The method as recited in Claim 1,
characterized in that the determination of the changeable activation signal takes place, in each case, after the conclusion of a successful assignment (126, 134) of a remote control operation (20) to a base station (10).

4. The method as recited in Claim 1,
characterized in that a new, changeable activation signal is determined (136) if a response signal sent back by a remote control operation (20) in response to an activation signal does not agree with the predetermined setpoint response signal in the base station (10).

5. The method as recited in Claim 1,
characterized in that the search signal is transmitted multiple times, one immediately after the other, if no contact signal is received in response to the preceding search signal.

6. The method as recited in Claim 4,
characterized in that the execution time in the redetermination of the changeable activation signal is lengthened in comparison to the shortest possible one.

7. A base station for carrying out the method as recited in Claim 1,
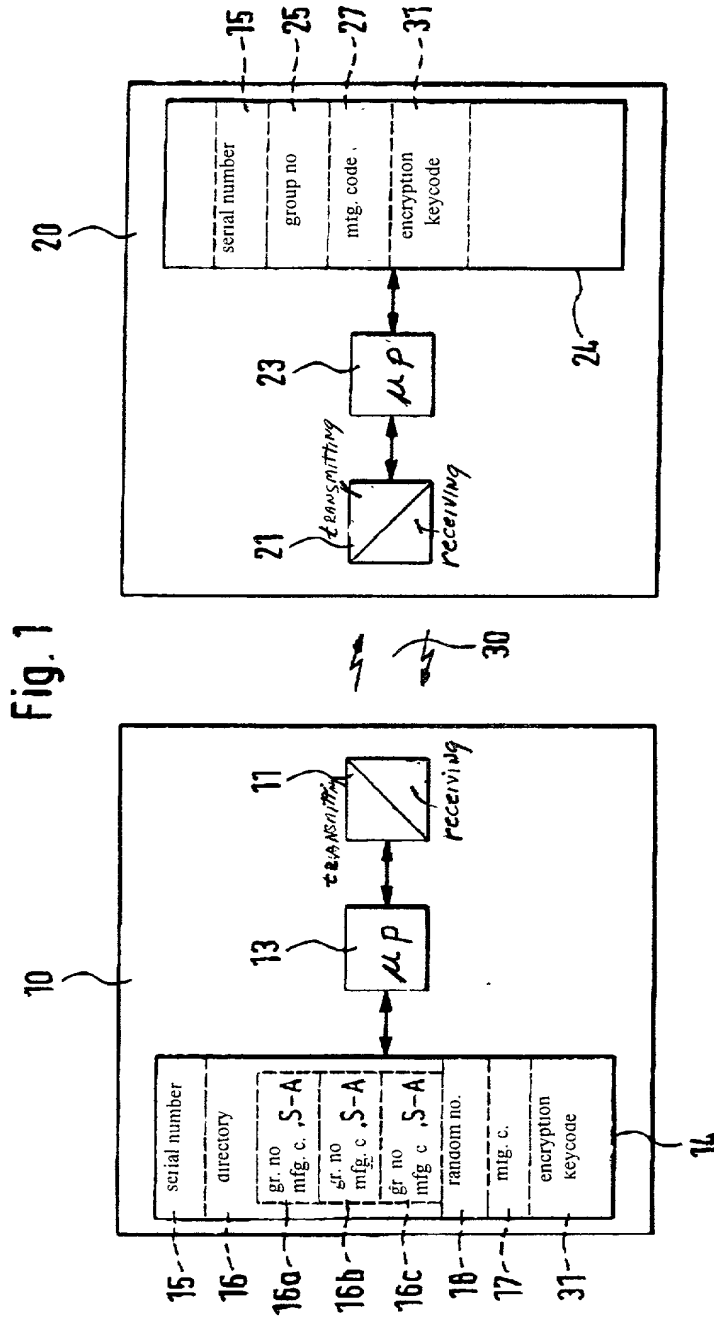
characterized by

- a transmitting/receiving device (11), which is designed for transmitting search and activation signals as well as for receiving contact and response signals from remote control operations (20),

- a means (13) for causing/evaluating the signals to be transmitted/which were received by the transmitting/receiving device (11),

- as well as a non-volatile memory unit (14) for storing fixed and changeable assignment information (15, 17, 31, 16, 18), which assigns at least one remote control operation (20) to the base station (10) and makes possible the test for matching.

8. The base station as recited in Claim 7,

characterized in that the non-volatile memory unit (14) is executed as a memory medium that can be programmed exactly once.

9. A remote control operation for carrying out the method as recited in Claim 1,

characterized by

- a transmitting/receiving device (21), which is designed to receive search and activation signals, as well as to transmit contact and response signals,

- means (23) for evaluating/causing signals to be received/to be transmitted,

- and a non-volatile memory unit (24) for storing assignment information (15, 25, 27, 31), which assigns the remote control operation (20) to a base station (10).
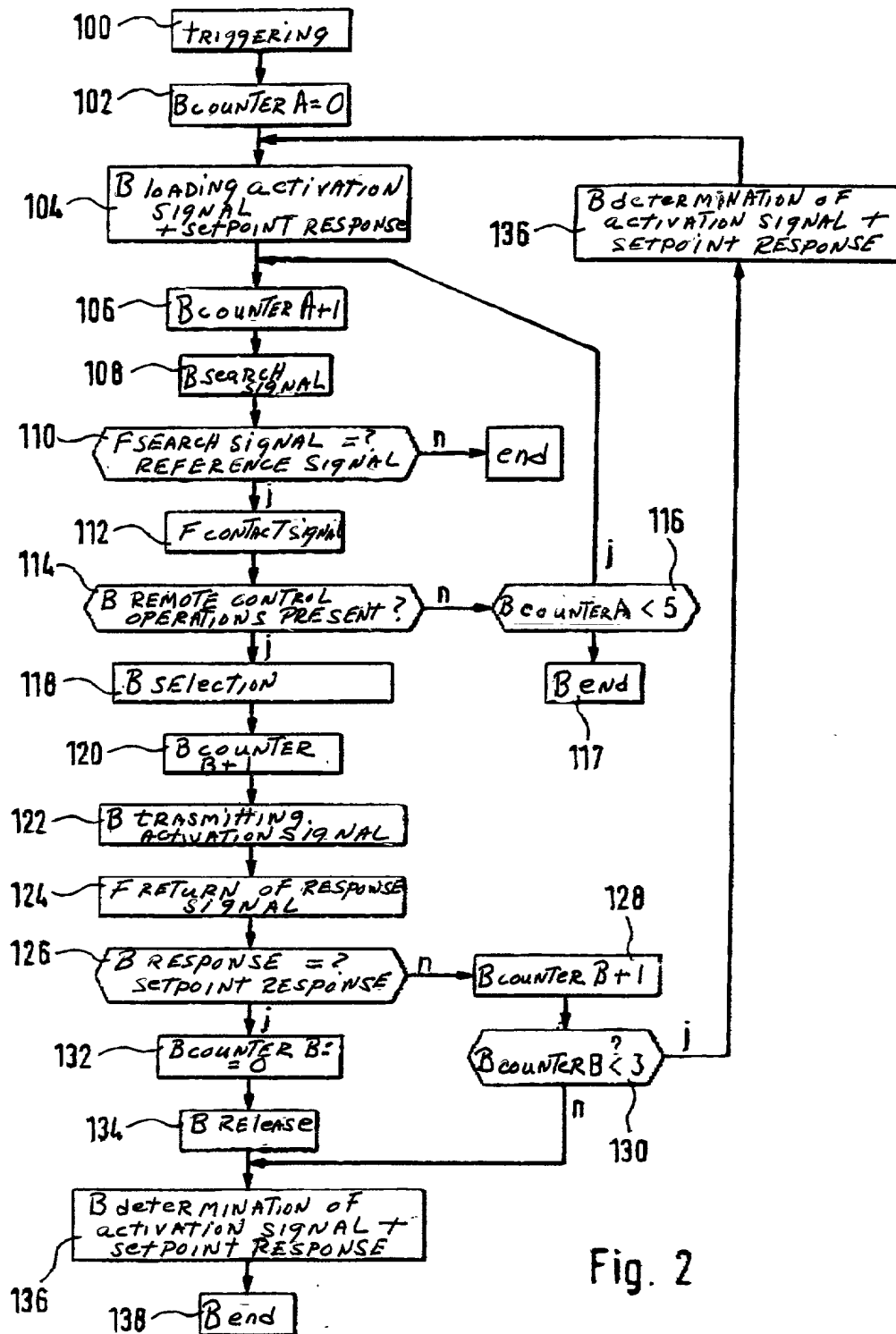
Fig. 1

09/509401

- 100 — TRIGGERING
- 102 — B COUNTER A = 0
- 104 — B LOADING ACTIVATION SIGNAL + SETPOINT RESPONSE
- 106 — B COUNTER A+1
- 108 — B SEARCH SIGNAL
- 110 — F SEARCH SIGNAL = ? REFERENCE SIGNAL — n → end
- 112 — F CONTACT SIGNAL
- 114 — B REMOTE CONTROL OPERATIONS PRESENT ? — n → B COUNTER A < 5 — 116
- 118 — B SELECTION
- 120 — B COUNTER B+
- 122 — B TRANSMITTING ACTIVATION SIGNAL
- 124 — F RETURN OF RESPONSE SIGNAL
- 126 — B RESPONSE = ? SETPOINT RESPONSE — n → B COUNTER B+1 — 128
- 132 — B COUNTER B = 0
- 134 — B RELEASE
- B COUNTER B < 3 ? — 130
- B end — 117
- 136 — B DETERMINATION OF ACTIVATION SIGNAL + SETPOINT RESPONSE
- 136 — B DETERMINATION OF ACTIVATION SIGNAL + SETPOINT RESPONSE
- 138 — B end

Fig. 2

COMBINED DECLARATION AND
POWER OF ATTORNEY FOR PATENT APPLICATION

As a below named inventor, I hereby declare that:

My residence, post office address and citizenship are as stated below adjacent to my name.

I believe I am the original, first and sole inventor (if only one name is listed below) or an original, first and joint inventor (if plural names are listed below) of the subject matter which is claimed and for which a patent is sought on the invention entitled **A METHOD FOR ASSIGNING A REMOTE CONTROL OPERATION TO A BASE STATION**, and the specification of which:

[ ]   is attached hereto;

[ ]   was filed as United States Application Serial No. _____ on

        _____, 19__ and was amended by the Preliminary

        Amendment filed on _____, 19__.

[X]   was filed as PCT International Application Number

        PCT/DE98/02808, on the 22nd day of September, 1998.

      [X]   an English translation of which is filed herewith.

I hereby state that I have reviewed and understand the contents of the above-identified specification, including the claims, as amended by any amendment referred to above.

I acknowledge the duty to disclose information which is material to the examination of this application in accordance with Title 37, Code of Federal Regulations, §1.56(a). I hereby claim foreign priority benefits under Title 35, United States Code § 119 of any foreign application(s) for patent or inventor's certificate or of any PCT international applications(s) designating at least one country other than the United States of America listed below and have also identified below any foreign application(s) for patent or inventor's certificate or any PCT international application(s) designating at least one country other than the United States of America filed by me on the same subject matter having a filing date before that of the application(s) of which priority is claimed:

PRIOR FOREIGN/PCT APPLICATION(S)
AND ANY PRIORITY CLAIMS UNDER 35 U.S.C. § 119

Country : Germany

Application No. : 197 42495.3

Date of Filing: September 26, 1997

Priority Claimed
Under 35 U.S.C. § 119 : [X] Yes   [ ] No

Country : Germany

Application No. :

Date of Filing: September 10, 1998

Priority Claimed
Under 35 U.S.C. § 119 : [X] Yes   [ ] No

I hereby claim the benefit under Title 35, United States Code § 120 of any United States Application or PCT International Application designating the United States of America that is/are listed below and, insofar as the subject matter of each of the claims of this application is not disclosed in that/those prior application(s) in the manner provided by the first paragraph of Title 35, United States Code § 112, I acknowledge the duty to disclose material information as defined in Title 37, Code of Federal Regulations § 1.56(a) which occurred between the filing date of the prior application(s) and the national or PCT international filing date of this application:

PRIOR U.S. APPLICATIONS OR
PCT INTERNATIONAL APPLICATIONS
DESIGNATING THE U.S. FOR BENEFIT UNDER 35 U.S.C. § 120

U.S. APPLICATIONS

Number :

Filing Date :

PCT APPLICATIONS
DESIGNATING THE U.S.

PCT Number :

PCT Filing Date :

I hereby appoint the following attorney(s) and/or agents to prosecute the above-identified application and transact all business in the Patent and Trademark Office connected therewith.

(List name(s) and registration number(s)):

Richard L. Mayer,   Reg. No. 22,490
Gerard A. Messina,   Reg. No. 35,952
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I hereby declare that all statements made herein of my own knowledge are true and that all statements made on information and belief are believed to be true and further that these statements were made with the knowledge that willful false statements and the like so made are punishable by fine or imprisonment or both under Section 1001 of Title 18 of the United States Code and that such willful false statements may jeopardize the validity of the application or any patent issuing thereon.

/–∞ Full name of inventor ___Stefan SCHMITZ___

Inventor's signature ___[signature]___ Date ___10. April 2000___

Citizenship   Federal Republic of Germany

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